



NASA VISION  
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# VISION

## THE NASA VALUES



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# Administrator's Corner

This month, the NASA family joined with the Nation to mourn the loss of former U.S. President Ronald Reagan. A tribute to his NASA legacy can be found on pages 4 and 5.

President Reagan's two terms included some of NASA's most progressive and poignant moments. From his call for a permanent American presence in space that led to the construction of the International Space Station, to his words of comfort and promise to a downcast nation following the Challenger disaster, we are indebted to President Reagan for his visionary and persistent leadership.

In the same spirit of discovery that defined President Reagan's approach to America's space exploration program, in January President

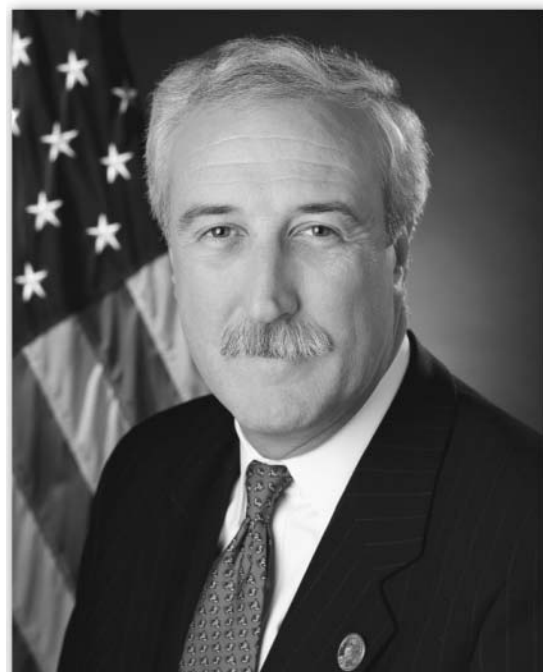


Photo credit: NASA/Bill Ingalls

George W. Bush proposed that the United States and partner space faring nations extend our exploration horizons throughout the solar system.

As we begin this journey, we know that we must overcome power generation, propulsion and human factors challenges if we are to explore space more extensively. To help us plan for Project Constellation and other elements of our space exploration program, the President's Commission on Implementation of United States Space Exploration Policy has been hard at work. On June 16, we received the report of the 10-member commission, chaired by Pete Aldridge Jr.

We look forward to reviewing the Commission's report, which I trust will be of great value to NASA as we plot out the next major steps to advance the Vision for Space Exploration.

**In the same spirit of discovery that defined President Reagan's approach to America's space exploration program, in January President George W. Bush proposed that the United States and partner space faring nations extend our exploration horizons throughout the solar system.**

Front page: The members of the STS-107 Orbit 4 team pose for a group portrait in the shuttle flight control room (WFCR) in Houston's Mission Control Center (MCC). Photo credit: NASA

# NASA Values

## Administrator O'Keefe Outlines NASA's Values

During NASA's Senior Leadership Council session in May 2004, the agency's senior leaders set time aside to thoughtfully consider NASA's values. Shortly thereafter, during the NASA Update on June 3, 2004, Administrator Sean O'Keefe shared NASA's Values and how they originate from survey results provided by NASA employees. The NASA Values are: Safety; The NASA Family; Excellence; and Integrity.

The benefit of having and promoting a central set of values is that all people in the NASA community will have a common and explicit basis for evaluating how their behavior aligns or misaligns with community expectations. The need to consider agency-level values is key to achieving "One NASA" and the culture change called for as a result of the survey findings conducted by Behavioral Science Technology Inc., earlier this year.

We are dedicated to the values of Safety, The NASA Family, Excellence, and Integrity. We aspire to achieve these values in everything we do. We commit ourselves to the hard work ahead to realize these values. Once we achieve them, we will be vigilant in upholding them.

We value:

**Safety** We are committed, individually and as a team, to protecting the safety and health of the public, our partners, our people and those assets that the Nation entrusts to us. Safety is the cornerstone upon which we build mission success.

**The NASA Family** We are a diverse team who are bound together in the most challenging and rewarding of endeavors. We respect each other, trust each other, support each other, mourn together, celebrate together and dream together.

**Excellence** We are committed to achieving the highest standards in engineering, science, management and leadership as we pioneer the future. We thrive on new ideas, experiences and continuous learning. We are always rigorous in our operations. We demonstrate and communicate an unquenchable spirit of ingenuity and innovation.

**Integrity** We embrace truthfulness and trust, and have the moral courage and obligation to be open, honest and ethical in all that we do. We treat everyone with dignity and respect. We recognize our responsibility and are accountable for the important work entrusted to us to better our society for future generations.

... which lead to mission success in our journey of exploration and discovery.



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# Around the Centers

## **AMES**researchcenter (ARC)

NASA's ARC brings the excitement of human spaceflight to the San Francisco Bay Area this month during a special exhibit of the International Space Station (ISS). Visitors to the NASA Ames Exploration Center can board an interactive exhibit, "Space Station Imagination," to catch a glimpse of how astronauts live and work in space. The exhibit is comprised of two modules of the space station: the Habitation Module, or living quarters, where the astronauts sleep, eat and tend to personal hygiene; and the Laboratory Module where multiple microgravity experiments are performed. Using actual footage from the ISS, three video presentations entertain and inform viewers with the story of human space exploration and the ISS Program.

## **DRYDEN**flightresearchcenter (DFRC)

Glenn McIntyre was at NASA DFRC on April 29 to speak about disabilities during the Center's Computer/Electronic Accommodation Program (CAP) and Disability Awareness briefings. McIntyre told the audience that most people are not born with disabilities but that 85 percent became disabled during a life experience. "[It's] not that people with disabilities can't do things, they just do them differently," McIntyre, a paraplegic, said. Lynda Sampson, NASA's Disability Program Manager, said 1 percent of NASA's workforce has severe disabilities. Information about CAP is available online at: [www.tricare.osd.mil/cap](http://www.tricare.osd.mil/cap)

## **GLENN**researchcenter (GRC)

NASA's GRC celebrated the release of a new book in the NASA History Series "Taming Liquid Hydrogen: The Centaur Upper Stage Rocket, 1958-2002." The book focuses on the technical and political hurdles that Centaur faced over the three decades that it was managed by NASA Lewis (now GRC). Center Director Dr. Julian Earls joined former Center Directors Andrew Stefan and Larry Ross, along with current and former employees who worked on the Centaur Program, at a special ceremony on June 9. Authors Dr. Virginia P. Dawson and Dr. Mark D. Bowles received the 2004 American Institute of Aeronautics and Astronautics Historic Manuscript Award at the ceremony.

## **GODDARD**spaceflightcenter (GSFC)

Principal Investigator for NASA's Wilkinson Microwave Anisotropy Probe (WMAP) Dr. Charles L. Bennett has been named a Fellow of the prestigious American Academy of Arts and Sciences. Using WMAP, scientists captured the afterglow of the big-bang theory and revealed that the universe is 13.7 billion years old and dominated by a mysterious dark energy. The confirmation of the dark energy, which drives the universe to expand at an ever-increasing rate, was hailed by *Science* magazine as the 2003 "Breakthrough of the Year." Since its inception in 1780, election to the Academy has been one of the highest honors bestowed on an individual.

## **JET**propulsionlaboratory (JPL)

Launched in March and funded by JPL's Navigator program, "The Night Sky Network" includes 177 amateur astronomy clubs from 46 states. Members receive outreach tool kits for star parties, after-school programs and Girl Scout events. The network, featured in the April edition of *Sky & Telescope*, has reached nearly 20,000 people at more than 150 events. One such event took place in Louisville, Ky., as kids peered through telescopes located near basketball courts and a playground.

## **JOHNSON**spacecenter (JSC)

JSC brought a little bit of space to the annual Houston International Festival. In keeping with this multicultural spirit, JSC's exhibit highlighted the International Space Station (ISS) and its partner nations. Approximately 500,000 people of diverse ethnicities attended the festival. In other news, ISS Expedition 9 Commander Gennady Padalka and NASA Science Officer and Flight Engineer Mike Fincke fielded questions from students gathered in Damariscotta, Maine during an in-flight, educational, question and answer session May 17 with the Maine Space Grant.

## **KENNEDY**spacecenter (KSC)

KSC recently received the flag of the Voluntary Protection Program (VPP), which recognizes the Center's status as a STAR site – the highest standing in the program. The designation comes from the Occupational Safety and Health Administration (OSHA). The VPP recognizes premier worksites where safety and health are considerations in all operations, and where programs are continually improved to go above and beyond compliance with OSHA regulations. KSC officially began the compliance process in December 2000.

## **LANGLEY**researchcenter (LaRC)

LaRC's Video Services Team was honored during NASA's first Videographer of the Year Award ceremony. Part of Langley's Media Services Branch, the team placed first in the production category for "The Case of the Galactic Vacation," an episode in the Office of Education's NASA SCI Files TV series. Videographers Ronald Beard and Franklin Fitzgerald of Crewstone Technologies, Inc., accepted a trophy and certificate at the annual NASA Digital Television (DTV) Work Group Meeting. DTV developed the award program to recognize NASA's videographers for their achievements in furthering the objectives of documentation within NASA.

## **MARSHALL**spaceflightcenter (MSFC)

On May 1, five student teams grabbed top honors in NASA's 2004 Student Launch Initiative, with winners hailing from Alabama, Indiana, Maryland and New York. The launch was the finale to a year-long mission by students to design and build reusable rockets as part of a hands-on educational program sponsored by MSFC. Cheered on by hundreds of rocketeers from across the country, 10 student teams launched their rockets in Manchester, Tenn., at "Southern Thunder 2004" - one of the largest regional rocket events in the United States. The Student Launch Initiative allows high school and college students to experience practical aerospace and engineering activities.

## **STENNIS**spacecenter (SSC)

NASA's SSC significantly increased its capability to test RP-1 (kerosene-fueled) test articles. Engineers recently accomplished a test-complex milestone with the installation of high-pressure, small - and large - volume RP-1 run systems. The enhancements enable SSC to perform liquid oxygen/RP-1 testing for NASA's advanced technology programs, which will develop and demonstrate technologies needed for safe, routine and cost-effective access to space in the future. Kerosene-fueled engines, such as the F-1 engine that propelled the Saturn V launch vehicle of the Apollo lunar program, have greater thrust capability than current hydrogen-fueled engines.

# Cassini to Unlock Secrets of Saturn's Ringed World

The international Cassini-Huygens mission is poised to begin an extensive tour of Saturn, its majestic rings and 31 known moons. After a seven-year journey covering 3.5 billion kilometers (2.2 billion miles), Cassini is scheduled to enter orbit around Saturn at 10:30 p.m. EDT, June 30, 2004.

"The Saturn system represents an unsurpassed laboratory where we can look for answers to many fundamental questions about the physics, chemistry and evolution of the planets and the conditions that give rise to life," said Dr. Edz Weiler, associate administrator for space science at NASA Headquarters, Washington.

Launched Oct. 15, 1997, Cassini is the most instrumented and capable spacecraft ever flown, including 12 instruments on the Cassini orbiter, and six more on the Huygens probe. The mission represents the best technical efforts of 260 scientists from the United States and 17 European nations. The total cost of the Cassini mission is approximately \$3 billion.

For the critical Saturn Orbit Insertion (SOI) maneuver, the spacecraft will fire its main engine for 96 minutes to reduce its speed and be captured into orbit as a satellite of Saturn. Passing through a gap between two of Saturn's rings, called the F and G rings, Cassini will swing close to the planet and begin the first of 76 orbits around Saturn's system, including 52 close encounters with nine of Saturn's 31 known moons in its four-year primary mission.

The study of Titan, Saturn's largest moon, is one of the major goals of the mission. Titan may preserve, in deep-freeze, many of the chemical compounds that preceded life on Earth. Cassini will execute 45 flybys of Titan, as close as 950 kilometers (590 miles) above the surface. This will permit high-resolution mapping of Titan's surface with the Titan radar imaging instrument, which can see through the opaque haze of the upper atmosphere.

"Titan is like a time machine taking us to the past to see what Earth might have been like," said Dr. Dennis Matson, Cassini project scientist at JPL. "The hazy moon may hold clues to how the primitive Earth evolved into a life-bearing planet."

On Dec. 24, 2004, Cassini will release the wok-shaped Huygens probe on its journey toward Titan. As the first probe to descend to the surface of a moon of another planet, Huygens will be the most distant descent of a robotic probe ever attempted on another object in the solar system. On Jan. 14, 2005, after a three-week ballistic freefall, Huygens will enter Titan's atmosphere, deploy its parachutes and begin 2.5 hours of intensive scientific observations. The Huygens probe will transmit the data gathered to the Cassini spacecraft, which will in turn relay the data back to Earth.

To learn more about the Cassini-Huygens mission, visit: [saturn.jpl.nasa.gov/index.cfm](http://saturn.jpl.nasa.gov/index.cfm) and [www.nasa.gov/cassini](http://www.nasa.gov/cassini)

*This computer-rendered image of Cassini during the Saturn Orbit Insertion (SOI) maneuver, just after the main engine has begun firing. The spacecraft is moving out of the plane of the page and to the right (firing to reduce its spacecraft velocity with respect to Saturn) and has just crossed the ring plane. Image credit: NASA/JPL*



# NASA REMEMBERS PRESIDENT REAGAN

1911-2004



President and Mrs. Reagan at the July 4, 1982 Columbia landing ceremony at Edwards AFB, Calif., with STS-4 commander Thomas K. Mattingly II (far left) and pilot Henry W. Hartsfield Jr. and NASA Administrator James Beggs (right).



President Reagan speaks to NASA employees and family and friends of the Challenger crew about the astronauts' accomplishments and sacrifices during the memorial service in 1986.



President Reagan displays the flight jacket presented to him by the STS-26 commander Rick Hauck. The name tag and the insignia were flown on the mission and returned to him post-flight.



President Reagan speaks to a large crowd during a visit to the Johnson Space Center during a tribute to STS-26, the Return To Flight mission.



President Reagan gets a laugh from NASA officials in Mission Control in 1981 when he jokingly asks astronauts Joe Engle and Richard Truly, then in orbit, if they could stop by Washington to pick him up.



President Reagan celebrates NASA's 25th Anniversary with astronauts and other NASA employees at the National Air and Space Museum, Oct. 19, 1983.



President Reagan presents astronaut John W. Young with NASA's Distinguished Service Medal as Vice President George Bush looks on in the Oval Office, May 19, 1981.



Columbia Space Shuttle astronauts Commander Thomas K. Mattingly (foreground) and Pilot Henry W. Hartsfield salute President Reagan and his wife, Nancy, as the astronauts begin the customary walk-around inspection of the orbiter after landing.

Since June 5, the NASA family has joined the nation and the world in mourning the loss of the 40th President of the United States, Ronald Wilson Reagan.

President Reagan's boundless optimism about America manifested itself in many ways. Among them was his energetic and unbridled support for NASA's space exploration program. Less than three months after he took the oath of office, on April 12, 1981, the Space Shuttle Columbia launched on its first mission, and after a six-year hiatus, Americans were back in space to stay.

A year later, in a memorable Fourth of July celebration, President Reagan and First Lady Nancy Reagan greeted the

Columbia STS-4 crew of Thomas Mattingly and Henry Hartsfield upon the conclusion of their successful mission at Edwards Air Force Base in California.

They also watched with thousands of other spectators as the newly completed Shuttle Orbiter Challenger took off on top of a specially modified 747 for the Kennedy Space Center. President Reagan spoke that morning about how the shuttles were the modern day equivalent of the Yankee Clipper ships that opened new horizons for this young nation.

Following the initial successes of the Space Shuttle program, space policy took on a new level of national importance in the Reagan Administration. In his 1984 State of the Union

Address, President Reagan announced plans for a permanent human presence in space with the construction of a space station, and he tasked NASA to include the international community to be a part of a project designed for the benefit of everyone on Earth.

Today, the International Space Station orbits overhead as a living testament to the optimism and visionary leadership of this great man.

President Reagan delivered a most memorable, eloquent speech when America lost the Challenger and its gallant crew. His heartfelt words did much to lessen the burden of the nation's sorrow and bolstered the American public's resolve to continue the journey into space.

During his remarks, the President reminded the American people, "Sometimes when we reach for the stars, we fall short, but we must pick ourselves up again and press on despite the pain."

Those words, written nearly two decades ago, still hold true today and they serve as a foundation on which NASA and all of Americans now work to build a prosperous and successful future.

As President Reagan said, "Our progress in space, taking giant steps for all mankind, is a tribute to American teamwork and excellence. Our finest minds in government, industry and academia have all pulled together. And we can be proud to say: We are first; we are the best; and we are so because we're free."

## New Astronaut Class Sworn In

At a ceremony in a place that echoed the finest hours of the U.S. space program, the Apollo-era flight control room, the new class of astronaut candidates were sworn in on Monday, June 14.

The 11 new astronauts will focus on executing the Vision for Space Exploration—perhaps returning to the moon.

John Young, an astronaut who walked on the moon and Johnson Space Center's associate director (technical), said in introducing the astronaut candidates that we've learned single-planet species don't last. "Right now, we're a single-planet species, and these young men and women can fix that."

Kent Rominger, a veteran of five spaceflights and chief of the Astronaut Corps, said this class brings a new

dimension, the educator astronauts. The administration "and NASA from the top down believes in education, more



specifically in math and science education. We're very hopeful that we can make a difference."

The initial assignment of most in the class will be flight training at Pensacola Naval Air Station, Fla. Three

members of the new class already are qualified pilots. They will not participate in flight training and did not attend the Monday ceremony.

Astronaut candidates attending the ceremony were: Joe Acaba, educator astronaut; Ricky Arnold, educator astronaut; Chris Cassidy, mission specialist; Jose Hernandez, mission specialist; Tom Marshburn, mission specialist; Dottie Metcalf-Lindenburger, educator astronaut; Bobby Satcher, mission specialist; and Shannon Walker, mission

specialist. For more information, visit [www.nasa.gov/vision/space/preparingtravel/ascan2004.html](http://www.nasa.gov/vision/space/preparingtravel/ascan2004.html)

*JSC Associate Director John W. Young addresses guests and media during a swearing-in of NASA's latest class of astronaut candidates. The ceremony took place on June 14 in the Mission Operations Control Room in the Mission Control Center. Photo credit: NASA/Renee Bouchard*

## Space Flight Leadership Council Meets



*SFLC members meet on June 9 in Utah. Members include: Associate Deputy Administrator, Technical Programs and SFLC Co-Chair Dr. Michael Greenfield; Associate Administrator for Space Flight and SFLC Co-Chair William Readdy; Associate Administrator for Safety and Mission Assurance Bryan O'Connor; Kennedy Space Center Director Jim Kennedy; Johnson Space Center Director Jefferson Howell; Marshall Space Flight Center Director Dave King; Stennis Space Center Director Thomas Donaldson; and Deputy Associate Administrator for International Space Station and Space Shuttle Programs Michael Kostelnik. Photo credit: NASA/Renee Bouchard*

NASA's Space Shuttle Program is making solid progress in meeting the milestones required for Return to Flight and the March 2005 deadline remains a reasonable target for resuming Space Shuttle missions. These are the conclusions of senior officials following the latest meeting of NASA's Space Flight Leadership Council (SFLC).

The SFLC is the group in charge of the agency's Return to Flight efforts. It met June 9 at ATK Thiokol's facility in Ogden, Utah. The group reviewed numerous Space Shuttle Program activities, including Thermal Protection System inspection and repair, efforts to reduce External Tank foam and other debris loss on launch, and the capability for the crew of a damaged Space Shuttle to take refuge on the International Space Station.

For information about NASA's Return to Flight work, visit on the Internet:

[www.nasa.gov/news/highlights/returntoflight.html](http://www.nasa.gov/news/highlights/returntoflight.html)

## Breaking Bread in Space



*As on Earth, space food comes in packages that must be disposed. Astronauts must throw their packages away in a trash compactor inside the space shuttle when they are done eating. Some packaging actually prevents food from flying away. The food packaging is designed to be flexible, easier to use, as well as maximize space when stowing or disposing food containers. Photo credit: NASA*

From the days of old sailing ships to today's high tech cruise liners, voyagers look forward to meal times as a break from the routine and for a pleasurable experience. It is much the same for our space voyagers. As NASA prepares for longer trips in space, mealtime will be just as important. Astronauts will depend on the ingenuity and expertise of experts at the Space Food Systems Laboratory at NASA's Johnson Space Center (JSC) for their dining pleasure.

Food choice is extremely important to astronauts. As in the days of long trips under sail, the longer the flight, the more significant those choices become. On the International Space Station, meals are stowed pantry-style so crewmembers can eat whatever they want in any order they wish. For instance, crewmembers

can have chicken three nights in a row if they so choose.

"Being on space station, so much of what is going on is beyond their control," said Vickie Kloeris, JSC manager of Space Food Systems. "Food is a comfort thing that they would like to feel they have some input on or some control over. It's just a big psychological thing – I don't know if we've flown anyone to station that has not been concerned about food."

Emilce (Emmy) Vest, Food Services director and executive chef for JSC, agrees that comfort food is of the utmost importance, especially when astronauts are in space.

"In situations where there is little outside stimulation and we're somewhat lonely, food becomes more of a focus

because it gives us sensual and chemical stimulation," Vest said. "We also crave the social payoff in 'breaking bread' with our companions."

There is also interesting anecdotal evidence that people's tastes change while in space. No one knows why, but astronauts report craving certain foods that they are not particularly fond of on Earth.

The food experts at JSC face a challenge of deciding the best way to prepare meals and stock pantries for years ahead of time as NASA returns humans to the moon and then to Mars.

Read more about this at [www.spaceflight.nasa.gov/shuttle/support/processing/spacefood/index.html](http://www.spaceflight.nasa.gov/shuttle/support/processing/spacefood/index.html)

# First NESC Awards Presented to NASA Employees

The first NASA Engineering and Safety Center (NESC) awards were presented to NASA employees representing four NASA centers. The NESC Leadership Briefing took place May 12 at the NASA Headquarters Auditorium in Washington, DC.

The NASA Engineering and Safety Center (NESC) was created in the aftermath of the Space Shuttle Columbia accident to serve as an independent technical resource for NASA managers and employees.

"I feel very good about what we've accomplished in our first six months," said NESC Director Ralph Roe, based at NASA Langley Research Center (LaRC) in Hampton, Va. "We have a talented core of people working within NESC and an outstanding group of people matrixed to NESC that we can call upon when needed. We've completed our first four technical assessments; we're working on several new major activities, and requests for our services keep coming in," Roe said.

Employees were recognized in three award categories for outstanding contributions to NESC's sponsored activities and to encourage critical examination of engineering problems.

The NESC Leadership Award was presented to Luat T. Nguyen for exceptional leadership in responding to a dissenting

opinion regarding the modified Pegasus/X-43A launch vehicle aerodynamics. Also presented the award was Dr. Michael G. Ryschkewitsch (NASA Goddard Space Flight Center) for exceptional leadership in promoting an environment in which technical concerns are brought forward and appropriately addressed.

The NESC Engineering Excellence Award was presented to Timothy R. Jett (NASA Marshall Space Flight Center) for extraordinary leadership that contributed to engineering excellence in support of the Rudder and Speed Brake Independent Assessment Team.

The NESC Director's Award was presented to Richard M. Wood (NASA LaRC) in recognition of his personal commitment to advocating further assessment of the aerodynamic risks associated with the flight of the modified Pegasus/X-43A launch vehicle. Also honored was Erwin V. Zaretsky (NASA Glenn Research Center) in recognition of his exemplary contributions and personal leadership in advocating further inspection and testing of the Space Shuttle Orbiter Rudder and Speed Brake actuators.

For more information on NESC, visit: [nesc.nasa.gov](http://nesc.nasa.gov)

From left to right: Bryan O'Connor, NASA's Associate Administrator for the Office of Safety and Mission Assurance (OSMA), and STS-114 astronauts Charles Camarda and Eileen Collins pose with the five NASA employees who received NASA Engineering and Safety Center (NESC) awards on May 12: Timothy R. Jett, MSFC; Luat T. Nguyen, LaRC; Michael G. Ryschkewitsch, GSFC; Michael Gilbert (for Richard Wood), LaRC; and Erwin Zaretsky, GRC.

Photo credit: NASA/Renee Bouchard

Bryan O'Connor, NASA AA for the OSMA, at the podium, with NESC director Ralph Roe looking on. In the monitors, are astronauts (from left to right) Eileen Collins and Charles Camarda who, with O'Connor and Roe, presented the awards. Collins will be the commander of the next Space Shuttle flight, STS-114. Camarda will also fly on STS-114. Photo credit: NASA/Renee Bouchard



# NASA's Web View of the Universe

The NASA Web Portal offers the public and NASA employees a unique view of the agency's exploration. Clicking on the "Multimedia" section of the top-level Web page: [www.nasa.gov/home/index.html](http://www.nasa.gov/home/index.html) takes users to online galleries of photos, videos and interactive features, as well as to live streams of NASA Television.

The NASA Photo Gallery offers a mix of recent and historical photographs that illustrate NASA programs. Updated daily, the gallery may feature a famous Gemini-era photo one day and the latest from the Hubble Space Telescope the next.

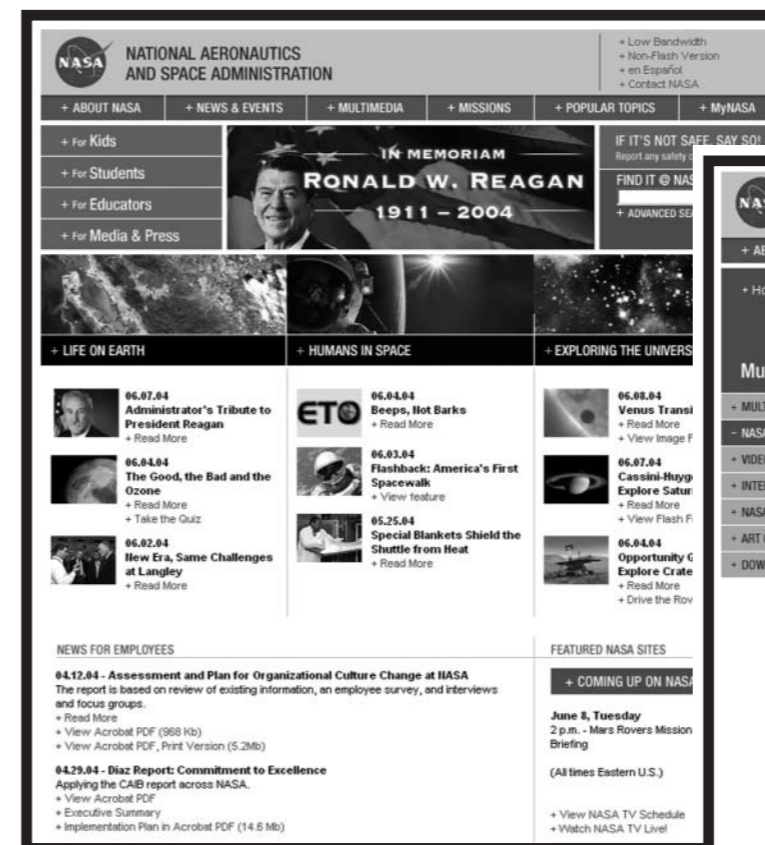
The Video Gallery presents users with animations and news programming, ranging from satellite data to clips of launches or NASA news conferences.

The Interactive Features section takes advantage of the Internet to present NASA information in ways that attract in users. For instance, browsers can call up the Astronaut Class of

2004 and click on an astronaut candidate's picture to read his or her biography. Another feature gives NASA Web portal visitors the chance to follow the launch of the Expedition 9 crew in an online photo album or drive the Mars Exploration Rover and look for signs of ancient water.

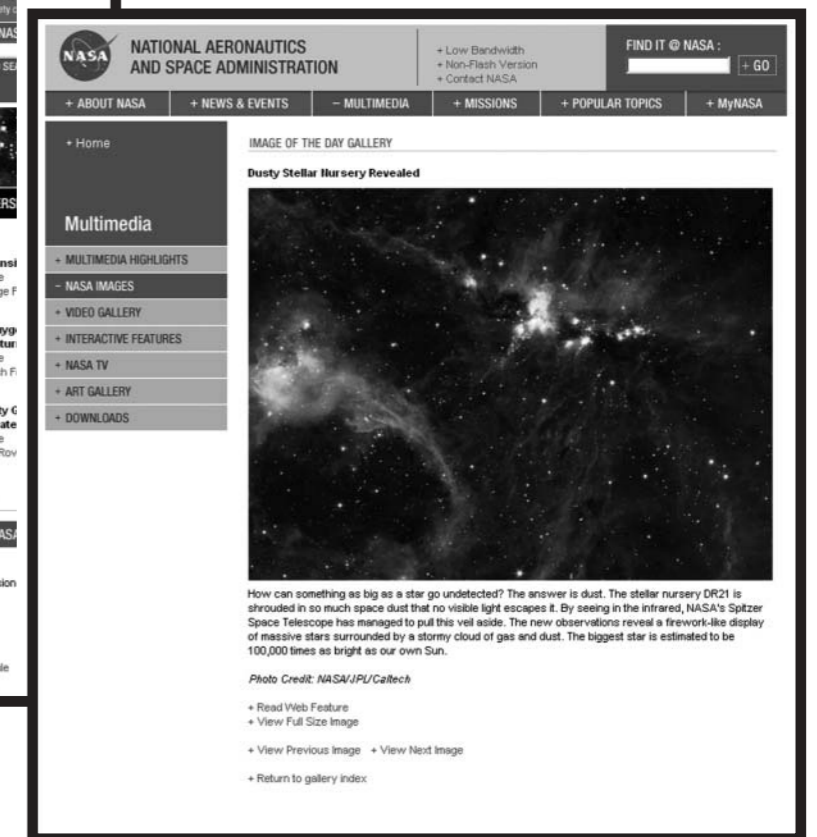
From either the top-level page or the NASA TV page, users can watch NASA Television on their computer desktops. In addition to NASA news conferences and educational programs, Internet users can see live events like Venus' transit across the sun or mission coverage of the International Space Station. In January, nearly 50,000 people tuned in to see the landings of Spirit and Opportunity, the Mars Exploration Rovers.

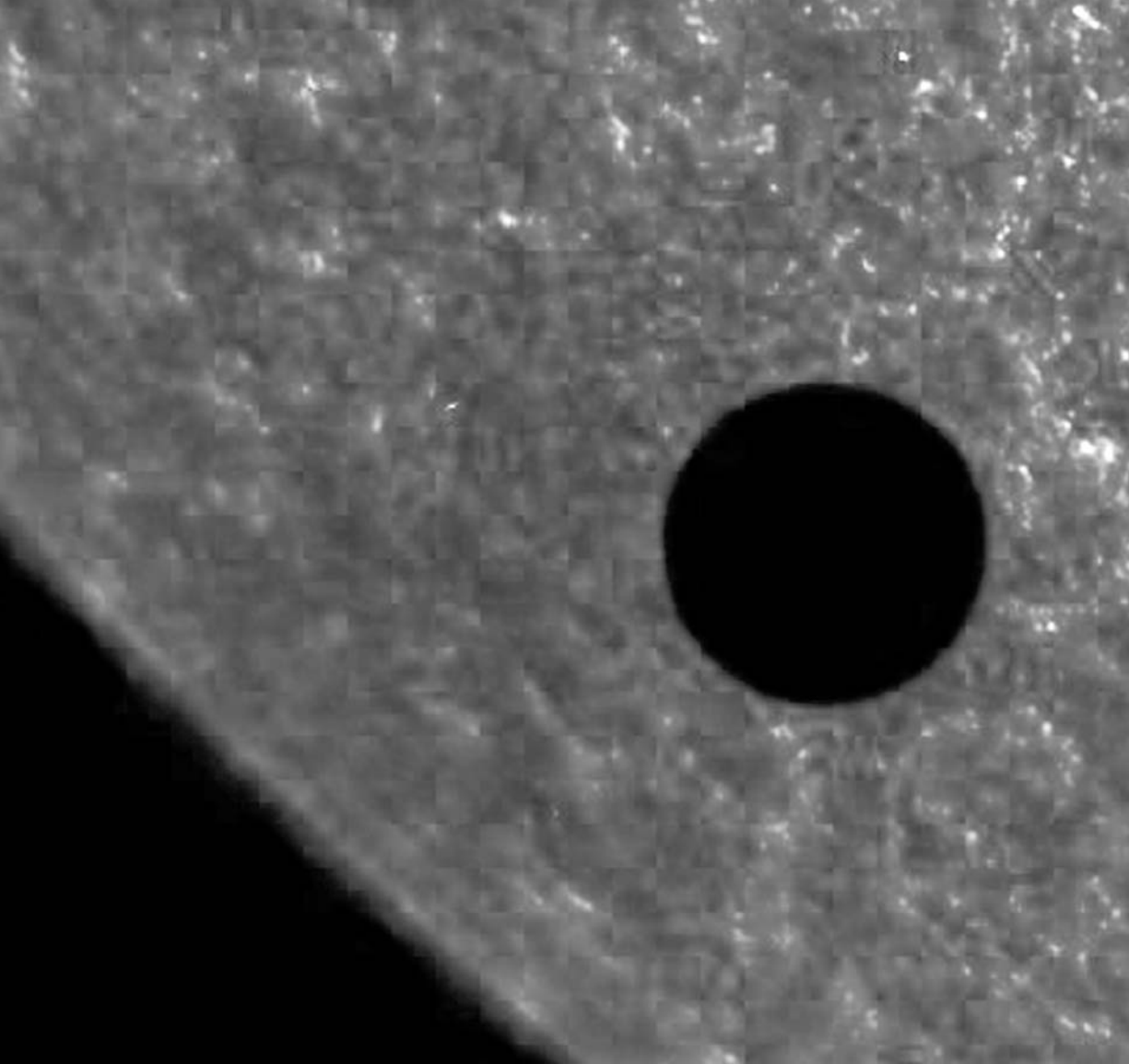
The Multimedia Gallery also features an overview of the NASA Art Program, and a Downloads section where users can obtain screensavers and desktops for their computers.



(Left) The top-level NASA Web page, [www.nasa.gov/home/index.html](http://www.nasa.gov/home/index.html).

(Below) The NASA Multimedia Page.





*Image credit: NASA/LMSAL*

## A Sight for Sore Eyes

On June 8, NASA joined the world in viewing the “Venus transit” - a rare celestial event in which our planetary neighbor Venus crossed in front of the sun. The event was captured from the unique perspective of NASA’s Sun-observing TRACE spacecraft.

The above image is an ultraviolet photo of Venus on the eastern limb of the Sun. The faint ring around the planet comes from the scattering of its atmosphere, which allows some sunlight to show around the edge of the otherwise dark planetary disk. The faint glow on the disk is an effect of the TRACE telescope.

TRACE was the only satellite able to observe the transit of Venus across the solar disk in visible light. Beautiful images were obtained throughout the 6-hour event. Over 40 television stations in the U.S. used these images, and over 700 stories were run on national, cable and local markets across the country through mid-morning June 8.

The last Venus transit occurred more than a century ago, in 1882, and was used to compute the distance from the Earth to the sun. Scientists working on NASA’s Kepler mission hope to discover Earth-like planets outside the solar system by searching for transits of other stars by orbiting planets.

Another Venus transit is expected in 2012 (June 6). After that, there will not be another Venus transit until 2117 (December 11).



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